

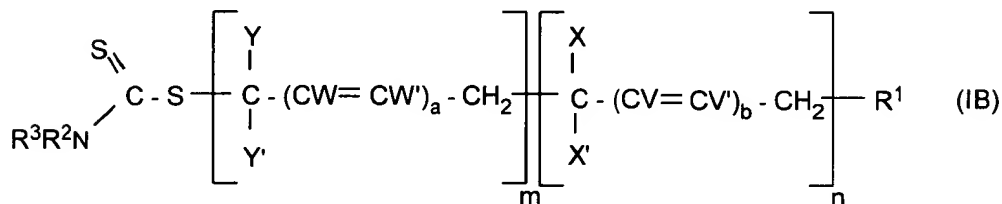
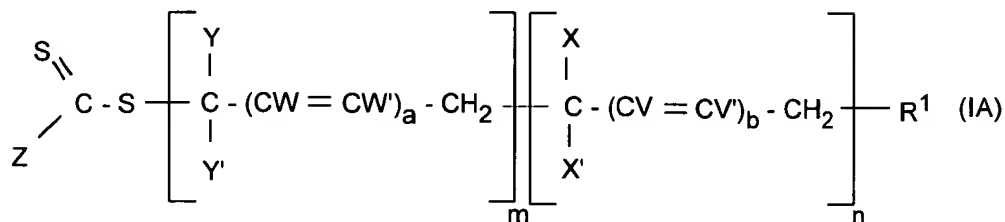
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-28. (Canceled)

29. (Currently Amended) A process for preparing block polymers of general formula (IA) or (IB):



in which formulae:

- R^1 represents:

an optionally substituted alkyl, acyl, aryl, alkene or alkyne group (i),

an optionally substituted or aromatic, saturated or unsaturated, carbocycle (ii), or

an optionally substituted or aromatic, saturated or unsaturated, heterocycle (iii),

optionally, these groups and rings (i), (ii) and (iii) are substituted with substituted

phenyl groups, substituted aromatic groups, or groups: alkoxycarbonyl or

aryloxycarbonyl (-COOR), carboxyl (-COOH), acyloxy (-O₂CR), carbamoyl

(-CONR₂), cyano (-CN), alkylcarbonyl, alkylarylcarbonyl, arylcarbonyl, arylalkylcarbonyl, phthalimido, maleimido, succinimido, amidino, guanidimo, hydroxyl (-OH), amino (-NR₂), halogen, allyl, epoxy, alkoxy (-OR), S-alkyl, S-aryl, organosilyl, groups having a hydrophilic or ionic character,

R representing an alkyl or aryl group,

- Z is an optionally substituted ring comprising a nitrogen atom via which Z is linked to the C(=S)-S- group of formula (IA), the other atoms of said ring inducing a delocalizing or electron-withdrawing effect with respect to the electron density of the nitrogen atom,

-R² and R³, which are identical or different, represent:

an optionally substituted alkyl, acyl, aryl, alkene or alkyne group (i),

an optionally substituted or aromatic, saturated or unsaturated, carbocycle (ii), or

an optionally substituted, saturated or unsaturated, heterocycle (iii),

optionally, these groups and rings (i), (ii) and (iii) are substituted with:

- substituted phenyl groups or substituted aromatic groups,

- groups: alkoxycarbonyl or aryloxycarbonyl (-COOR), carboxyl (-COOH),

acyloxy (-O₂CR), carbamoyl (-CONR₂), cyano (-CN), alkylcarbonyl,

alkylarylcarbonyl, arylcarbonyl, arylalkylcarbonyl, phthalimido, maleimido,

succinimido, amidino, guanidimo, hydroxyl (-OH), amino (-NR₂), halogen,

allyl, epoxy, alkoxy (-OR), S-alkyl, S-aryl,

- groups having a hydrophilic or ionic character,

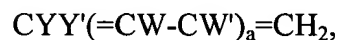
R representing an alkyl or aryl group,

and, for at least R^2 or R^3 , these groups and rings (i), (ii) and (iii) induce a delocalizing or electron-withdrawing effect with respect to the electron density of the nitrogen atom to which R^2 and R^3 are linked,

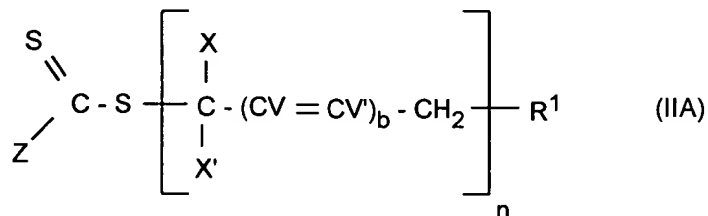
- V , V' , W and W' , which are identical or different, represent: H, an alkyl group or a halogen,
- X , X' , Y and Y' , which are identical or different, represent H, a halogen, a group R' , OR' , $OCOR'$, $NHCOH$, OH , NH_2 , NHR' , $N(R')_2$, $(R')_2N^+O^-$, $NHCOR'$, CO_2H , CO_2R' , CN , $CONH_2$, $CONHR'$ or $CONR'_2$, wherein R' is alkyl, aryl, aralkyl, alkaryl, alkene or organosilyl groups, optionally perfluorinated and optionally substituted with one or more carboxyl, epoxy, hydroxyl, alkoxy, amino, halogen or sulphonic groups,
- a and b , which are identical or different, are equal to 0 or 1,
- m and n , which are identical or different, are greater than 1, the individual repeat units being identical or different,

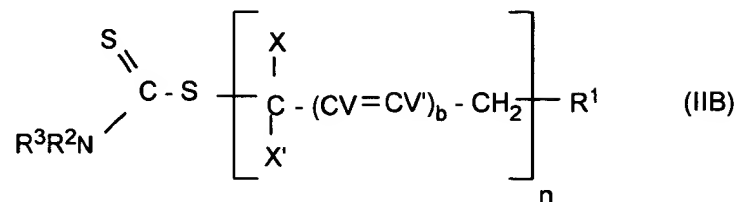
said process comprising the step of bringing into contact with each other:

- an ethylenically unsaturated monomer of formula:



- a precursor compound of general formula (IIA) or (IIB):





wherein Z, X, X', V, V', R¹, R² and R³ have the same meaning, and b and n the same value, as previously; and

- a radical polymerization initiator compound, and wherein said block polymers have a polydispersity index of at most 1.5 ~~2.0~~.

30. (Previously presented) A process according to claim 29, wherein the ethylenically unsaturated monomer is styrene, butadiene, chloroprene, (meth)acrylic esters, or vinyl nitriles.

31. (Previously presented) A process according to claim 29, wherein, in compounds of formula (IA) and (IIA), the ring Z is a ring made of carbon atoms.

32. (Previously presented) A process according to claim 29, wherein the ring Z further comprises at least one heteroatom other than the nitrogen which links the ring Z to -C(=S)S, this heteroatom being O, S, N or P.

33. (Previously presented) A process according to claim 29, wherein, in the compounds of formula (IA) and (IIA), the ring Z is an aromatic ring.

34. (Previously presented) A process according to claim 29, wherein, in the compounds of formula (IA) and (IIA), the ring Z comprises at least one of the following functional groups: carbonyl (C=O), SO₂, POR'', R'' representing an alkyl,

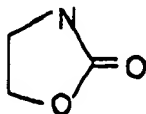
aryl, OR, SR or NR₂ group, wherein the R group is identical or different and represents an alkyl or aryl group.

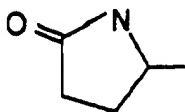
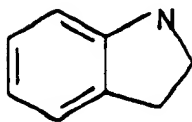
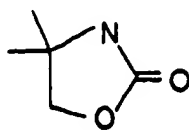
35. (Previously presented) A process according to claim 29, wherein, in the compounds of formula (IA) and (IIA), the ring Z is substituted with at least one of the following groups: alkyl, aryl, alkoxycarbonyl or aryloxycarbonyl (-COOR), carboxyl (-COOH), acyloxy (-O₂CR), carbamoyl (-CONR₂), R representing an alkyl or aryl group, cyano (-CN), alkylcarbonyl, alkylarylcarbonyl, arylcarbonyl, arylalkylcarbonyl, phthalimido, maleimido, succinimido, amidino, guanidino, hydroxyl (-OH), amino (-NR₂), halogen, allyl, epoxy, alkoxy (-OR), S-alkyl, S-aryl, groups having a hydrophilic or ionic character, polyalkylene oxide chains, or cationic substituents.

36. (Previously presented) A process according to claim 29, wherein, in the compounds of formula (IA) and (IIA), the ring Z is substituted with at least one carbocycle or a heterocycle, optionally aromatic or substituted.

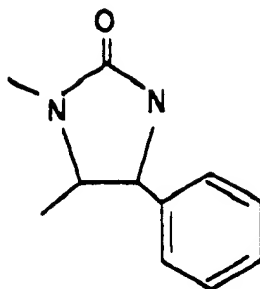
37. (Previously presented) A process according to claim 36, wherein, in the compounds of formula (IA) and (IIA), the ring Z and its cyclic substituent have two common atoms.

38. (Previously presented) A process according to claim 29, wherein the ring Z is one of the following rings:





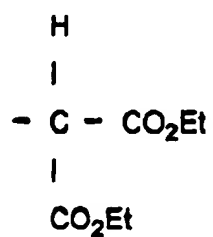
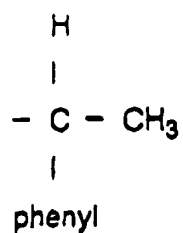
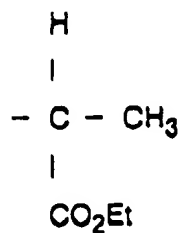
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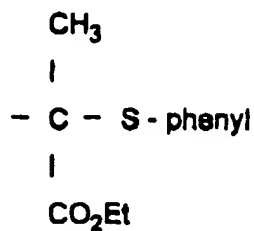


39. (Previously presented) A process according to claim 29, wherein, in compounds of formula (IB) and (IIB), R^2 or R^3 exert a π withdrawing effect.
40. (Previously presented) A process according to claim 40, wherein R^2 or R^3 represent a carbonyl or (hetero)aromatic group.
41. (Previously presented) A process according to claim 40, wherein, in compounds of formula (IB) and (IIB), R^2 or R^3 exert a Σ withdrawing effect.

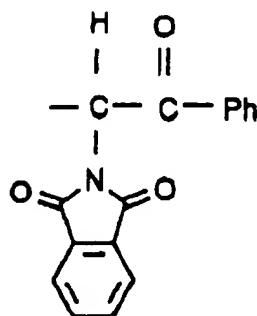
42. (Previously presented) A process according to claim 29, wherein R^2 or R^3 represent an alkyl group substituted with electron-withdrawing groups.

43. (Previously presented) A process according to claim 29, wherein R^1 is one of the following groups:

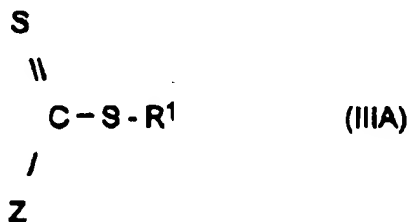


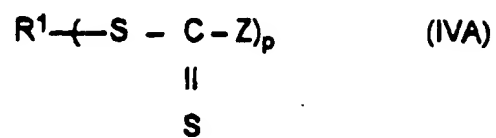


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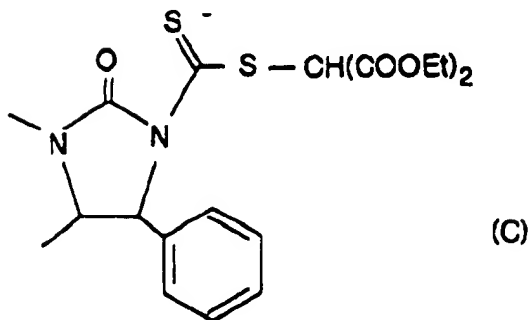
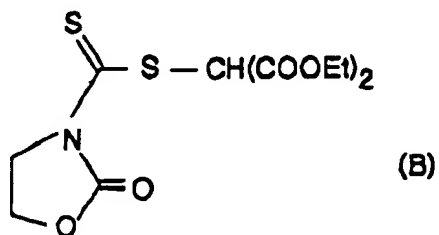
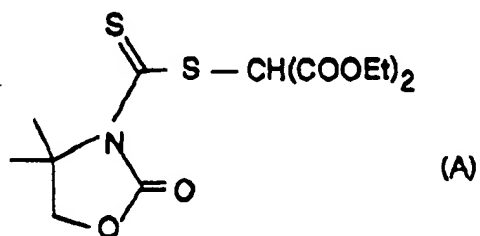
44. (Previously presented) A process according to claim 29, wherein the precursor compound of general formula (IIA) is a polymer coming from the radical polymerization of an ethylenically unsaturated monomer of formula: $\text{CXX}'(=\text{CV}-\text{CV}')_b=\text{CH}_2$ during which said monomer is brought into contact with a radical polymerization initiator compound and a compound of general formula (IIIA) or (IVA):





p being between 2 and 10.

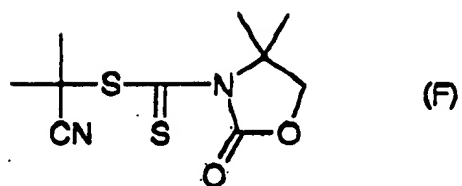
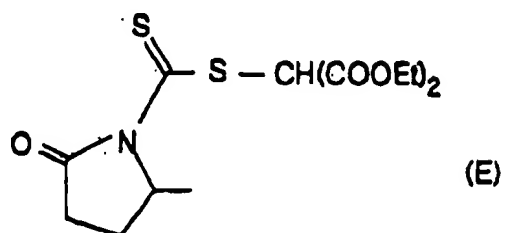
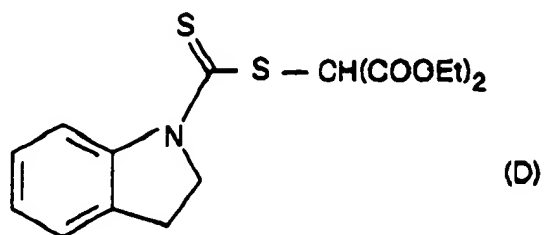
45. (Previously presented) A process according to claim 44, wherein the compound of formula (IIIA) is a compound of the following formulae:

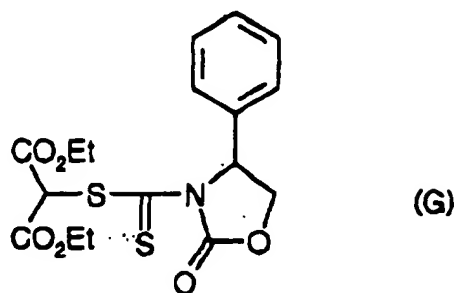


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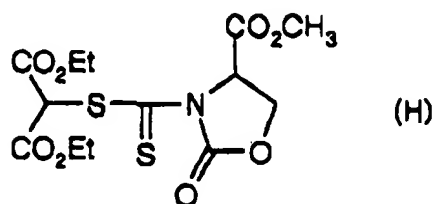
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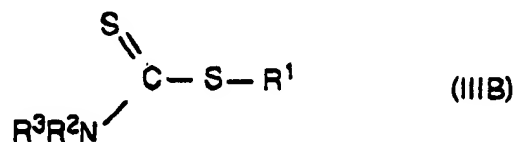


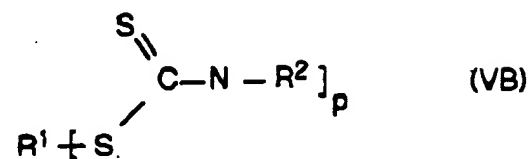
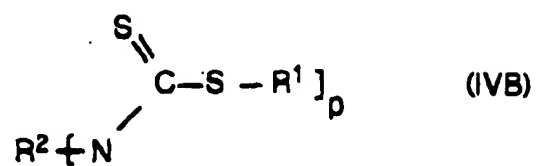


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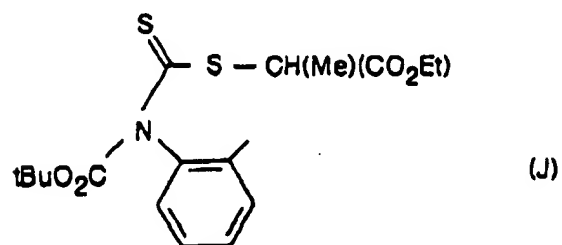
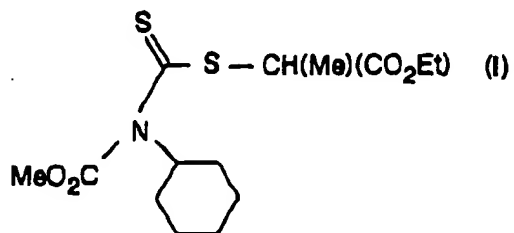
46. (Previously presented) A process according to claim 29, wherein the precursor compound of general formula (IIB) is a polymer coming from the radical polymerization of an ethylenically unsaturated monomer of formula: $CXX' (=CV-CV')_b=CH_2$ during which said monomer is brought into contact with a radical polymerization initiator compound and a compound of general formula (IIIB), (IVB) or (VB):

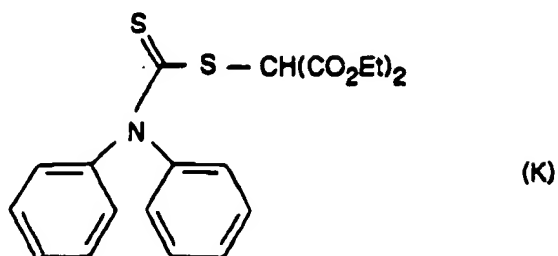




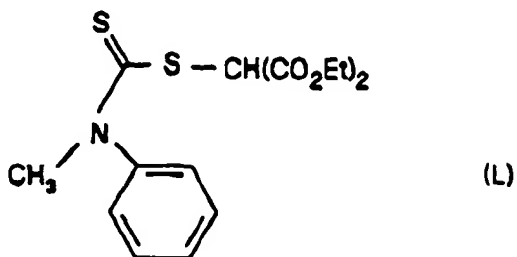
p being between 2 and 10.

47. (Previously presented) A process according to claim 46, wherein the compound of formula (IIIB) is a compound of the following formulae:





or



48. (Previously presented) A process for preparing multiblock polymers, comprising the step of:

a) repeating at least once the implementation of the process of claim 29, using:

- different monomers from those of the previous implementation, and
- instead of the precursor compound of formula (IIA) or (IIB), the block polymer

coming from the previous implementation.

49-51. (Canceled)

52. (Previously presented) Block polymer according to claim 49, having at least two polymer blocks chosen from the following combinations:

- polystyrene/polymethyl acrylate,
- polystyrene/polyethyl acrylate,
- polystyrene/poly(*tert*-butyl acrylate),

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- polyethyl acrylate/polyvinyl acetate,
- polybutyl acrylate/polyvinyl acetate, or
- poly(*tert*-butyl acrylate)/polyvinyl acetate.

53. (Previously presented) A process according to claim 29, wherein groups having a hydrophilic or ionic character are alkali metal salts of carboxylic acids alkali metal salts of sulphonic acid, polyalkylene oxide chains (PEO, PPO), or quaternary ammonium salts.

54. (Canceled)